

Babcock & Wilcox

a McDermott company

7401 West Mansfield Avenue
Suite 410
Lakewood, CO 80235
(303) 988-8203

FILE 18591-3

D-
PLS COPY
CDJ, AEN, JKH,
JN
6/24

June 14, 1991

Department of Water & Power
City of Los Angeles
111 N. Hope Street
Room 604
Los Angeles, CA 90051

Attn: Raffi Krikorian

Re: Intermountain Power Project
Burners

Dear Raffi:

During discussions of the revised DRB, the IPSC staff developed the following questions. These questions are listed below with responses.

- Q. Would the alloy section of the new coal nozzle also be 800H? Is there a special procedure for welding 800H to carbon steel?
- A. The 800H material was proposed for register parts to increase strength for resistance to buckling. This was not considered necessary for the nozzle tips which would remain 309 stainless. Since the nozzle tips are fabricated from rolled plate, 800H material could be used if the customer desires. All welding procedures for 800H material will be specified by Technology when and if the proposed burner arrangement is detailed.
- Q. Do the register doors still require trimming? Would we do this in the shop, or wait until field observations?
- A. The intent of the design is to eliminate backplate warpage such that the register doors will not require trimming.
- Q. Would it be appropriate to add stiffener's to the "floating" section of the backplate? (This would be to further resist dishing.)
- A. Differential expansion between the plate and stiffeners is considered to be a potential problem. The concept of the floating plate is to eliminate the thermal stress that was causing warpage.

IP7_000610

- Q. The quadrant handle continues to drift away from the notched plate on the existing burners. Any change to the new?
- A. As things stand today, there are no quadrants on the burner. We have been advised IPSC now wants electric drives on the outer air registers. Both the spin vanes and inner air sliding disks are actuated by push/pull handles.
- Q. What are our recommended TC locations on the new burner? Can they be shop installed?
- A. Minimum thermocouples will be 1 each on the nozzle tip, inner air zone sleeve, throat sleeve, and register backplate. We have always hesitated to install thermocouples in the shop due to breakage during shipping and installation.
- Q. Due to differential expansion between the front plate and the slip seal casing, do we really believe the packing will stay? If the gap is tight enough to hold the packing hot, how do you repack cold?
- A. The new slip seal arrangement was designed to eliminate the differential and high temperatures at the rope packing. This will need to be evaluated on the initial test burners. One side is staggered bars to allow packing installation.
- Q. No handle was shown for operating the spin vanes. Would one or two be used? Do we have experience with this arrangement?
- A. The push/pull arrangement for the spin vanes and inner air disks use two handles each. This arrangement is our current standard for XCL burners. Before adopting as a standard, a full size mock-up was used to evaluate the design.
- Q. Would slip joints come on the regulating rods for the registers?
- A. Universal type slip joints will be used on the regulating rods for the outer air registers.
- Q. Are conical diffusers included?
- A. It was our thought that the existing coal nozzle assemblies would be used with the new registers assuming the existing nozzles are serviceable. Conical diffusers were therefore not included.

Mr. Raffi Krikorian
Department of Water & Power

-3-

June 14, 1991

- Q. On the lighter shrouds, if the strap fails, the shroud moves and interferes with the lighter, resulting in the burner being inoperable. A different design or perhaps a second strap would be in order.
- A. We can review the supports for the lighter shroud in the detail stage of the engineering.
- Q. Hard stops for minimum and maximum position on the outer air register are requested.
- A. Mechanical stops can be supplied for the outer registers, however, they are probably unnecessary if electric drives are used.

Please advise if you or IPSC have any additional questions.

Very truly yours,

BABCOCK & WILCOX COMPANY



D.C. Langley
Regional Service Manager
Western Region

DCL:pm/369

cc: J.A. Nelson, IPSC
C.A. Palmberg, Barberton
E.L. Wells, Barberton
F.J. McGinley, Jr., Denver

IP7_000612